

Notice of References Cited

Application/Control No.

10/023,344

Applicant(s)/Patent Under

Reexamination

MIWA ET AL.

Examiner

Lao Y Lun

Art Unit

2673

Page 1 of 1

U.S. PATENT DOCUMENTS

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification |
|---|---|--|-----------------|------------------|----------------|
| | A | US-5,061,920 | 10-1991 | Nelson, Larry A. | 345/89 |
| | B | US- | | | |
| | C | US- | | | |
| | D | US- | | | |
| | E | US- | | | |
| | F | US- | | | |
| | G | US- | | | |
| | H | US- | | | |
| | I | US- | | | |
| | J | US- | | | |
| | K | US- | | | |
| | L | US- | | | |
| | M | US- | | | |

FOREIGN PATENT DOCUMENTS

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | Classification |
|---|---|--|-----------------|---------|------|----------------|
| | N | | | | | |
| | O | | | | | |
| | P | | | | | |
| | Q | | | | | |
| | R | | | | | |
| | S | | | | | |
| | T | | | | | |

NON-PATENT DOCUMENTS

| * | | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|---|
| | U | |
| | V | |
| | W | |
| | X | |

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)

Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

| | | |
|------------------------------|-----------------|--------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/023,344 | MIWA ET AL. |
| | Examiner | Art Unit |
| | Lao Y Lun | 2673 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 09 February 2002.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-12 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 17 December 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All. b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation of "driving part driving said data signal lines by using a plurality of driving devices together for each data signal line simultaneously" in claim 1 is confusing since it is unknown that data signal lines are driven simultaneously by using a plurality of driving devices together or each data signal line are simultaneously driven by a plurality of driving devices. The specification only disclose each data signal line are simultaneously driven by a plurality of driving devices(DRV1-DRV3)(see figure 12 and paragraph #109) and each block of data lines(DL) are sequentially driven by a plurality of driving devices(see figures 3, 6; paragraphs #12, 42, 75 and 83-85) .

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 rejected under 35 U.S.C. 102(b) as being anticipated by Karube et al(6,072,456).

Karube et al teach a liquid crystal display comprising: a display part(701) displaying an image in accordance with image data supplied through data signal lines(707); and a driving part driving said data signal lines(707) by using a plurality of driving devices(702, 11-14) together for each data signal line(707) simultaneously(two data lines driven simultaneously in each block)see figures 1-3; column 1, lines 60-65; column 3, lines 28-42; column 4, lines 9-50 and column 5, lines 34-50).

As to claim 1, Karube et al teach each data signal line are simultaneously driven by a plurality of driving devices(101-104, SV1-SV8, 113-116)(see figures 1-2 and column 4, lines 31-50).

As to claim 2, Karube et al teach a plurality of driving devices(702, 11-14) are disposed on the same side of the data signal line(see figure 1).

As to claim 3, Karube et al teach driving devices(702, 11-14) used for driving each data signal line is controlled in accordance with a particular type of said display part(see figures 1-3).

As to claim 4, Karube et al teach wiring part provided on a

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substrate on which the display part is formed and driving device(702, 11-14) connected to the signal data line707) in said wiring part (see figure 1 and column 1, lines 4-9).

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Murade et al(6,377,235).

As to claims 1-4, Murade et al teach a liquid crystal display comprising: a display part displaying an image in accordance with image data supplied through data signal lines(35); and a driving part driving said data signal lines(35) by using a plurality of driving devices(111, 304, 301) together for each data signal line(35) simultaneously all data signal lines(35) in each group are driven simultaneously (see figures 1-2; column 14, lines 51-60; column 15, lines 55-68; column 16, lines 1-57 and column 20, lines 48-57).

As to claim 1, Murade et al teach each data signal line are simultaneously driven by a plurality of driving devices(111, 304, 301)(see figure 2).

As to claims 5-6, Murade et al teach a liquid crystal display comprising: a display part displaying an image in accordance

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with image display data(V1D1-V1D6) supplied through data signal lines(35); and a driving part driving data signal lines(35) by supplying a plurality of sets of same image display data to each data signal line simultaneously(all data signal lines(35) in each group are driven simultaneously(see figures 2-3; column 16, lines 24-68 and column 20, lines 47-58).

7. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al(6,611,261).

As to claims 1-4, Zhang et al teach a liquid crystal display comprising: a display part displaying an image in accordance with image data supplied through data signal lines(22); and a driving part driving said data signal lines(22) by using a plurality of driving devices(12, BL1-BL8) together for each data signal line(22) simultaneously(data lines in each block are driven simultaneously(see figures 1-2, 8, 15; column 9, lines 53-67 and column 10, lines 1-9).

As to claim 1, Zhang et al teach each data signal line are simultaneously driven by a plurality of driving devices(driver A and driving circuit(B)(BL1-BL8)(see figure 15).

As to claims 5-6, Zhang et al teach an LCD display comprising: a display part displaying an image in accordance with image display data(D1-D192, D193-D384) applied through data signal lines(22); and a driving part driving data signal lines(22) by supplying a plurality of sets of same image display data to each data signal line(22) simultaneously(see figures 1-2, 8;

column 9, lines 53-67 and column 10, lines 1-9).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murade et al(6,377,235) in view of Yamazaki et al(6,392,628).

Murade et al teaches a display system having a peripheral circuit(301) for dividing a display into a plurality of parts and a driving part(111, 304) for supplying the first control signal(CL, SP(L), Clinv) and data signals to a peripheral circuit(301) (see figures 1-3; column 18, lines 40-65 and column 20, lines 46-56).

Murade et al fail to disclose a level converting part.

Yamazaki et al teach a peripheral circuit(504) supplying image display data(506) to a display part according to a given first control signal(C1, C2); a driving part(501, 502, 503, 506) supplying the first control signal(C1, C2) and the image display data(506) to the peripheral circuit(504); a level

converting part built (LS) in said driving part, and performing level conversion of a given second control signal so as to generate the first control signal (C1,C2), wherein the level converting part (LS) converts the level of the control signal as to create a signal level applying to a circuit including the peripheral circuit (504) (see figures 3-6; 21, 22; column 2, lines 12-15 and column 19, lines 17-34). It would have been obvious to have modified Murade et al with the teaching of Yamazaki et al, so as to save the power by reduce the level of the input control signals and bring back the control signals to the desired level later.

As to claim 8, Yamazaki et al teach display part and the peripheral circuit are formed integrally on a same substrate (see figures 3, 18 and column 1, lines 27-33).

As to claims 9-12, Yamazaki et al teach a driving part (501, 502, 503, 506) having a dividing part (502) and a selecting part (NAND1, NAND2 and invertors (see figure 5).

Response to Arguments

10. Applicant's arguments filed on February 9, 2004 have been fully considered but they are not persuasive.

Applicants state that the term of "simultaneously" added in claim 1 is for correcting typographical error on page 5. The examiner disagrees with that term of "simultaneously" added in claim 1 has been changed the scope of the claim.

Applicants argue that Karube teaches a sequential driving method, not a simultaneously driving method on page 5. The examiner disagrees with that since two data signal lines in each block(113-116) are simultaneously driven by a plurality of driving circuits(101-104, 113-116)(see figures 1-3 and column 1, lines 60-65). However, applicants teaches a sequential driving method (see figures 3, 6; paragraphs #12, 42, 75 and 83-85) .

Applicants argue that Murade teaches the image signals(VID1-VID6) are sequentially applied on page 6. However, Murade teaches the image signals(VID1-VID6) can simultaneously applied too(see figure 2 and column 20, lines 46-56). However, applicants teaches a sequential driving method (see figures 3, 6; paragraphs #12, 42, 75 and 83-85) .

Applicants argue that Zhang et al teach a sequentially driving method on page 6. However, Zhang teaches the image signals(D1-Dn)) can simultaneously applied data signal lines in blocks(see figures 1, 8 and 15). However, applicants teaches a sequential driving method (see figures 3, 6; paragraphs #12, 42, 75 and 83-85) .

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nelson(5,061,920) teaches a level shifter(40).

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi, Lao whose telephone number is (703) 305-4873.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

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proceeding should be directed to the Technology Center 2600 Customer Service Office
whose telephone number is (703) 306-0377.

March 17, 2004

Lun-yi Lao

Lun-yi Lao
Primary Examiner